This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously Amended) An optical system comprising:

a light source;

an object lens for focusing emitted light from the light source onto an optical recording medium;

first optical separating means which is provided between the light source and the object lens and which separates an optical path of reflected light from the optical recording medium, from an optical path of the emitted light from the light source;

second optical separating means which separates the reflected light from the optical recording medium via the first optical separating means into a first group of light and a second group of light; and

an optical detector for receiving the first group of light and the second group of light;

wherein an optical signal strength of the first group of light is larger than an optical signal strength of the second group of light, and

wherein the system is constituted such that a tracking error signal by a differential phase method, a tracking error signal by a push-pull method and a data signal recorded on the optical recording medium are detected from the first group of light while a focusing error signal is detected from the second group of light.

2. (Previously Cancelled)

3. (Original) An optical head apparatus as claimed in claim 1, wherein:

the second optical separating means comprises a hologram optical element,

the first group of light is +1st-order diffracted light of the hologram optical element, and

the second group of light is -1st-order diffracted light of the hologram optical element.

4. (Original) An optical head apparatus as claimed in claim 3, wherein:

the hologram optical element is divided into four regions by two divided lines respectively in parallel with a radial direction and a tangential direction of the optical recording medium, and

directions of lattices or pitches of the lattices of the four regions are different from each other.

5. (Currently Amended) An optical head apparatus as claimed in claim 3, wherein:

a phase distribution of the lattices in the hologram optical element is formed in a step-like shape of four levels, ~~and~~

1st and 3rd stages are equal in width of the lattice,

2nd and 4th stages are equal in width of the lattice,

when a phase difference of light transmitting through the two contiguous levels is designated by a notation ϕ, ~~and~~ the lattice pitch as the sum of widths of the lattices at ~~a~~ the 1-st stage through ~~a~~ the 4-th stage ~~are~~ respectively is designated by a notations ~~p/2-w, w,p/2-w and~~ w p, and the width of the lattice at each of the 2nd and the 4th stages is designated by a notation w, ϕ is substantially equal to $\pi/2$ and w/p falls within the range of $0 < w/p < 0.25$ or $0.25 < w/p < 0.5$.

6. (Withdrawn from Consideration) An optical head apparatus as claimed in claim 1, wherein:

the first optical separating means and the second optical separating means are an integrated polarizing hologram optical element,

the polarizing hologram optical element transmits the emitted light from the light source and diffracts the reflected light from the optical recording medium, and

the first group of light is +1st-order diffracted light of the polarizing hologram optical element while the second group of light is -1st-order diffracted light of the polarizing hologram optical element.

7. (Withdrawn from Consideration) An optical head apparatus as claimed in claim 6, wherein:

the polarizing hologram optical element is divided into four regions by two divided lines respectively in parallel with a radial direction and a tangential direction of the optical recording medium, and

directions of lattices or pitches of the lattices of the four regions are different from each other.

8. (Withdrawn from Consideration) An optical head apparatus as claimed in claim 6, wherein:

a phase distribution of lattices in the polarizing hologram optical element is formed in a step-like shape of four levels,

when phase differences of light transmitting through the two contiguous levels for ordinary light and extraordinary light are designated respectively by notation ϕo and ϕe and widths of the lattices of a 1-st stage through a 4-th stage are respectively designated by notations p/2-w, w, p/2-w and w, ϕo is substantially equal to 0, ϕe is substantially equal to $\pi/2$ and w/p falls within the range of $0 < w/p < 0.25$ or $0.25 < w/p < 0.5$, and

the emitted light from the light source is incident on the polarizing hologram optical element as the ordinary light while the reflected light from the optical recording medium is incident on the polarizing hologram optical element as the extraordinary light.

9. (Withdrawn from Consideration) An optical head apparatus as claimed in claim 6, wherein:

a phase distribution of lattices in the polarizing hologram optical element is formed in a step-like shape of four levels,

when phase differences of light transmitting through the two contiguous levels for ordinary light and extraordinary light are designated respectively by notations ϕo and ϕe and widths of the lattices of a 1-st stage through a 4-th stage are respectively designated by notations p/2-w, w, p/2-w and w, ϕo is substantially equal to $\pi/2$, ϕe is substantially equal to 0 and w/p falls within the range of $0 < w/p < 0.25$ or $0.25 < w/p < 0.5$, and

the emitted light from the light source is incident on the polarizing hologram optical element as the extraordinary light while the reflected light from the optical recording medium is incident on the polarizing hologram optical element as the ordinary light.

10. (Withdrawn from Consideration) An optical head apparatus as claimed in claim 1, wherein:

the second optical separating means comprises a Wollaston prism,

the first group of light is one of two refracted lights of the Wollaston prism, and

the second group of light is the other of two refracted lights of the Wollaston prism.

11. (Withdrawn from Consideration) An optical head apparatus as claimed in claim 10, wherein:

the Wollaston prism includes a first prism disposed on an incident side of the reflected light from the optical recording medium and a second prism disposed on an emitting side of the reflected light from the optical recording medium,

an optical axis of the first prism is inclined by an angle θ to a direction in parallel with a polarizing direction of the reflected light from the optical recording medium,

an optical axis of the second prism is inclined by the angle θ to a direction orthogonal to the polarizing direction of the reflected light from the optical recording medium,

the first group of light is refracted light constituting extraordinary light in the first prism and constituting ordinary light in the second prism of the reflected lights from the optical recording medium,

the second group of light is refracted light constituting the ordinary light in the first prism and constituting the extraordinary light in the second prism in the reflected light from the optical recording medium, and

θ falls within the range of $-45° < \theta < 0°$ or $0° < \theta < 45°$.

12. (Withdrawn from Consideration) An optical head apparatus as claimed in claim 10, wherein:

the Wollaston prism includes a first prism disposed on an incident side of the reflected light from the optical recording medium and a second prism disposed on an emitting side of the reflected light from the optical recording medium,

an optical axis of the first prism is inclined by an angle θ to a direction in parallel with a polarizing direction of the reflected light from the optical recording medium,

an optical axis of the second prism is inclined by the angle θ to a direction orthogonal to the polarizing direction of the reflected light from the optical recording medium,

the first group of light is refracted light constituting ordinary light in the first prism and constituting extraordinary light in the second prism in the reflected light from the optical recording medium,

the second group of light is refracted light constituting the extraordinary light in the first prism and constituting the ordinary light in the second prism of the reflected lights from the optical recording medium, and

θ falls within the range of $-90° < \theta < -45°$ or $45° < \theta < 90°$.

13. (Withdrawn from Consideration) An optical head apparatus as claimed in claim 10, wherein:

a four division prism for refracting the reflected light from the optical recording medium is provided between the Wollaston prism and the optical detector or between the first optical separating means and the Wollaston prism,

the four division prism is divided into four regions by two dividing lines respectively in parallel with a radial direction and a tangential direction of the optical recording medium, and

directions of inclination of the emitting faces in respect of the incident faces or angles made by the emitting faces and the incident faces of the four regions are different from each other.

14. (Withdrawn from Consideration) An optical head apparatus as claimed in claim 10, wherein:

a hologram optical element for diffracting the reflected light from the optical recording medium as +1st-order diffracted light is provided between the Wollaston prism and the optical detector or between the first optical separating means and the Wollaston prism,

the hologram optical element is divided into four regions by two dividing lines respectively in parallel with a radial direction and a tangential direction of the optical recording medium, and

directions of lattices, pitches of the lattices or phase distributions of the lattices are different from each other.

15. (Withdrawn from Consideration) An optical head apparatus as claimed in claim 14, wherein:

the phase distribution of the lattices in the hologram optical element is formed in a step-like shape of N levels (N is an integer equal to or larger than 3), and

when a phase difference of light transmitting through the two contiguous levels is designated by a notation ϕ and all of widths of the lattices of a 1-st

stage through an N-th stage are designated by a notation p/N, ϕ is substantially equal to $2\pi/N$.

16. (Previously Added) An optical method comprising:

focusing emitted light from a light source onto an optical recording medium;

separating an optical path of reflected light from the optical recording medium, from an optical path of the emitted light from the light source;

separating the reflected light from the optical recording medium via the first separating step into a first group of light and a second group of light; and

receiving the first group of light and the second group of light;

wherein an optical signal strength of the first group of light is larger than an optical signal strength of the second group of light, and

wherein a tracking error signal by one of a differential phase process and a push-pull process and a data signal recorded on the optical recording medium are detected from the first group of light while a focusing error signal is detected from the second group of light.

17. (Newly Added) An optical system as claimed in claim 1, wherein the step-shaped dielectric film includes a plurality of four-step units, each of the plurality of four-step units including a first step having a first length, a second step having a second length shorter than the first length, a third step having the first length, and a fourth step having the second length.

no such thing obj.

18. (Newly Added) An optical system as claimed in claim 1, wherein the second optical separating means includes a holographic optical element that is divided into four regions by two divided lines respectively in parallel with a radial direction and a tangential direction of the optical recording medium, and

wherein pitches of the lattices of a first two of the four regions are different from pitches of the lattices of the other two of the four regions.

19. (Newly Added) An optical system as claimed in claim 1, wherein the second optical separating means comprises:

a glass substrate; and

a step-shaped dielectric film formed on the glass substrate and positioned between the glass substrate and the optical detector,

wherein adjacent steps of the step-shaped dielectric film are of different lengths, to thereby output the first group of light being of a larger optical signal strength as compared to the second group of light.

20. (Newly Added) An optical system as claimed in claim 16, further comprising:

manufacturing step?

forming a light separating unit having a glass substrate and a step-shaped dielectric film formed on the glass substrate and positioned between the glass substrate and the optical detector, wherein adjacent steps of the step-shaped dielectric film are of different lengths, to thereby output the first group of light being of a larger optical signal strength as compared to the second group of light,

wherein the step of separating the reflected light from the optical recording medium into the first group of light and the second group of light is accomplished by way of the light separating unit.